AMENDMENTS

IN THE CLAIMS:

What is claimed is:

1. (Currently amended) In a data processing system having a CPU, a non-volatile read/write memory device in the CPU's address space, and at least one other device further having read/write memory in the CPU's address space, a method for executing an instruction stream using the read/write non-volatile memory device comprising:

for each instruction in the instruction stream:

(a) retrieving an instruction from said non-volatile read/write memory device;

(b) determining if said retrieved instruction is a write instruction;

(c) executing said retrieved instruction if said retrieved instruction is not a write instruction;

(d) loading instructions into memory mapped into said CPU's address space that is not in said non-volatile read/write memory device needed to carry out the write operation of said retrieved instruction, if said retrieved instruction is a write instruction;

(e) executing said loaded instructions, carrying out said write operation on said non-volatile read/write memory device thereby; and

(f) ~~returning to execute from said non-volatile read/write memory device by~~ pointing to ~~an instruction that corresponds to the~~a next instruction to be executed. ~~after carrying out said write operation on said non-volatile read/write memory device, and continuing with step (a) until there are no more instructions to execute.~~

2. (New) The method for executing an instruction stream in claim 1 where said non-volatile read/write memory device is FLASH memory.

3. (New) The method for executing an instruction stream in claim 1 where said instruction stream comprises boot code.

4. (New) The method for executing an instruction stream in claim 1 where said instruction stream comprises a portion of an operating system.

5. The method for executing an instruction stream in claim 1 where said instruction stream comprises IOS.

6. (New) The method for executing an instruction stream in claim 1 where step (f) further comprises writing system initialization data.

7. (New) The method for executing an instruction stream in claim 1 where step (f) further comprises writing configuration data.

8. (New) A program storage device readable by a machine, tangibly embodying a program of instructions executable by a machine for executing an instruction stream where the program storage device is a non-volatile read/write memory

device, and where the machine further comprises at least one other device having read/write memory addressable by the machine, the method comprising:

for each instruction in the instruction stream:

retrieving an instruction from said non-volatile read/write memory device;

determining if said retrieved instruction is a write instruction;

executing said retrieved instruction if said retrieved instruction is not a write instruction;

loading instructions into memory mapped into said CPU's address space that is not in said non-volatile read/write memory device needed to carry out the write operation of said retrieved instruction, if said retrieved instruction is a write instruction;

executing said loaded instructions, carrying out said write operation on said non-volatile read/write memory device thereby; and

pointing to a next instruction to be executed.

9. (New) The program storage device of claim 8 where said non-volatile read/write memory device is FLASH memory.

10. (New) The program storage device of claim 8 where said instruction stream comprises boot code.

11. (New) The program storage device of claim 8 where said instruction stream comprises a portion of an operating system.

12. (New) The program storage device of claim 8 where said instruction stream comprises IOS.

13. (New) The program storage device of claim 8 where said writing step further comprises writing system initialization data.

14. (New) The program storage device of claim 8 where said writing step further comprises writing configuration data.